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12 UNITED STATES DISTRICT COURT
13 FOR THE NORTHERN DISTRICT OF CALIFORNIA
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15 FUZZYSHARP TECHNOLOGIES
16 INCORPORATED,

17 Plaintiff,

18 vs.

19 NVIDIA CORPORATION,
20

21 Defendant.

Civil Action No. 12-CV-06375 JST

**AMENDED COMPLAINT FOR
PATENT INFRINGEMENT AND
DEMAND FOR JURY TRIAL**

22 NOW COMES Plaintiff, FUZZYSHARP TECHNOLOGIES INCORPORATED
23 (“FST”), through its attorneys, and files this Amended Complaint for Patent Infringement and
24 Demand for Jury Trial against Nvidia Corporation (“Nvidia”) pursuant to the Order dated April
25 18, 2013.
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JURISDICTION AND VENUE

1. This is an action for patent infringement of United States Patent No. 6,172,679 (hereinafter “the ‘679 Patent”), and United States Patent No. 6,618,047 (hereinafter “the ‘047 Patent”) pursuant to the laws of the United States of America as set forth in Title 35 Sections 271 and 281 of the United States Code.
2. This court has subject matter jurisdiction over this action pursuant to 28 U.S.C. Sec. 1338(a) and 28 U.S.C. Sec. 1331.
3. Venue is proper in this judicial district under 28 U.S.C. § 1391(d) and 1400 (b) because Defendant Nvidia has committed acts of infringement in this Federal District.
4. Plaintiff FST, is a corporation organized under the laws of the State of Texas.
5. On information and belief, Defendant Nvidia is a Delaware Corporation, and has a corporate office at 2701 San Tomas Expressway, Santa Clara, CA 95050.

CAUSES OF ACTION FOR PATENT INFRINGEMENT

6. On January 9, 2001, the ‘679 Patent entitled “VISIBILITY CALCULATIONS FOR 3D COMPUTER GRAPHICS”, was duly and legally issued to Hong Lip Lim, as the sole patentee.
7. The ‘679 Patent is assigned entirely to Plaintiff FST
8. Plaintiff FST is the sole owner of the ‘679 Patent, and has standing to bring this action.
9. On September 9, 2003, the ‘047 Patent entitled “VISIBILITY CALCULATIONS FOR 3D COMPUTER GRAPHICS”, was duly and legally issued to Hong Lip Lim, as the sole patentee.
10. The ‘047 Patent is assigned entirely to FST.

BACKGROUND

11. The patents-in-suit disclose and claim methods of improving the rendering of 3D graphic images on a monitor or the like. Hewlett Packard was probably the earliest company to recognize the importance of the inventions, and described the key step as “occlusion” to suggest that objects in a scene to be rendered that were behind other objects would be excluded from further processing by the computer, thereby minimizing the demand on the resources of the computer. The names “occlusion” and “occlusion culling” are commonly used in the industry to refer to the methods covered by the patents-in-suit. The Defendant was among the many companies to rush to the market with hardware designed to employ the inventions of FST. See Ex. A, Chapter 6 from “Hardware Occlusion Queries Made Useful”. Chapter 6 is taken from an Nvidia web site as indicated in the footnote of each page. The Chapter 6 discloses that a program query is used to test if an object is occluded and the query was created by Nvidia. Nvidia at page 20 does, however, acknowledge that the technique disclosed may not be free from Intellectual Property claims. This is possibly an oblique acknowledgment of the Plaintiff’s rights. Ex. B shows the occlusion query created by Nvidia and urged for use by the graphics industry by Nvidia.
12. Initially, the test to determine if an object in a 3D scene was hidden before rendering a computer scene of a 3D scene was developed as part of the library of OpenGL and the test was called, “occlusion query”. Nvidia added its version to the OpenGL Library and touted its effectiveness, thereby urging the graphics industry to carry out methods infringing FST’s patents. Subsequently, Microsoft decided on a different approach for an occlusion type query and for awhile, computer systems and graphics cards for accelerating graphic production worked with either the occlusion query in the OpenGL Library , or Microsoft’s Library, DirectX, or both. See Ex. C on the development of DirectX.

- 1 13. Microsoft named its queries relevant to occlusion,
2 “D3D11_QUERY_OCCLUSION, and
3 D3D11_QUERY_OCCLUSION_PREDICATE. See Ex. D showing that the test
4 determines if “samples passed the depth and stencil tests”.
- 5 14. Nvidia sell and offers to sell graphic cards operable under Microsoft DirectX 11
6 for creating graphic displays. See Ex. E.
- 7 15. FST sued Nvidia on September 10, 2010 on the same patents-in-suit in this
8 Judicial District, thereby providing Nvidia with good notice that it was and is
9 engaged in patent infringement of the patents-in-suit.

10 **COUNT ONE**

- 11 16. Plaintiff FST, repeats and incorporates herein the allegations contained in
12 paragraphs 1 through 15 above.
- 13 17. Defendant Nvidia is engaged in wilful infringement of at least claim 1 of the ‘679
14 Patent pursuant to 35 U.S.C. § 271(a) by selling, and offering to sell Graphic
15 Processors Units capable of performing occlusion culling and the like during the
16 computer graphics rendering process.

17 **COUNT TWO**

- 18 18. Plaintiff, FST, repeats and incorporates herein the allegations contained in
19 paragraphs 1 through 15 above.
- 20 19. Defendant Intel is engaged in wilful infringement of at least claim 1 of the ‘0479
21 Patent pursuant to 35 U.S.C. § 271(a) at least by selling, and offering to sell
22 Graphic Processors Units capable of performing occlusion culling and the like
23 during the computer graphics rendering process.
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JURY DEMAND

20. Pursuant to Fed. R. Civ. P. 38, Plaintiff hereby demands a jury trial as to all issues in this lawsuit.

1 **PRAYER FOR RELIEF**

2 WHEREFORE, Plaintiff respectfully requests this Court to:

- 3 a. Enter judgment for Plaintiff on this Amended Complaint;
- 4 b. Order that an accounting be had for the damages to the Plaintiff by the infringing
- 5 activities of the Defendant;
- 6 c. Award reasonable damages in the form of reasonable royalties.
- 7 d. Award Plaintiff treble damages due to willful patent infringement;
- 8 e. Award Plaintiff interest and costs; and
- 9 f. Award Plaintiff such other and further relief as this Court may deem just and
- 10 equitable.

11 THE PLAINTIFF
12 FUZZYSHARP TECHNOLOGIES
13 INCORPORATED

14
15 /s/ David Fink
16 David Fink
17 Attorney for the Plaintiff
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